

EATING DISORDERS

Anorexia Nervosa

Bulimia Nervosa

Obesity

Learning Objectives

- **Define anorexia, bulimia, and obesity.**
- **Describe the characteristics, patient profile, subtypes, signs and symptoms, lab findings, course and treatment of anorexia and bulimia.**

Learning Objectives

- **Describe the patient profile and health problems caused by obesity.**
- **Describe diagnostic procedures, lab findings, treatment options, and issues related to obesity.**

Eating Disorders

- **Anorexia Nervosa**
- **Bulimia Nervosa**
- **Obesity**

Eating Disorders

- **Recognized since 9th century**



Anorexia

- **Refusal to maintain weight**
- **Afraid of gaining weight**
- **Significantly disturbed body perception**

Anorexia

- **Profile**
 - **Found frequently in pre- and post-puberty**
 - **Affects females more than males**
 - **Possible media influence**
 - **At risk professions: athletics, acting, dancing, modeling**
 - **Disease of developed countries**



Anorexia

- **Subtypes**
 - **Restricting Type**
 - **Binge-Eating/Purging Type**



Anorexia

- **Medical condition**
 - **Signs & symptoms**
 - **Many attributable to starvation**
 - **Post menarche-Amenorrhea-common**
 - **Prepubertal-delay of menarche**

Anorexia

- **Medical condition**
- **Other Signs & symptoms**
 - **Constipation, abdominal pain, cold intolerance, lethargy, emaciation, bradycardia, peripheral edema, hypercarotemia, hypertrophy of salivary glands, dental enamel erosion, scars or calluses on the dorsum of the hand**



Anorexia

- **Semi-starvation can affect most major organ systems, produces disturbances**
- **Lab Findings**
 - **Leukopenia, mild anemia, elevated BUN indicates dehydration, LFTs may be elevated, hypercholesterolemia**

Anorexia

- **Situations/Other Lab findings**
 - **Induced vomiting may lead to metabolic alkalosis, hypochloremia, hypokalemia**
 - **Laxative abuse may cause metabolic acidosis**
 - **Abnormal thyroid function**
 - **Females < estrogen; Males < testosterone**

Anorexia

- **Situations/Lab findings**
 - **EKG shows sinus bradycardia**
 - **EEG shows metabolic encephalopathy**
 - **Brain imaging indicated increase in ventricular-brain ratio**

Anorexia

- **Rare after age 40**
- **Course**
 - **Calcium loss can lead to bone fractures**
 - **Starvation affects vital organs**
 - **Anorexia has highest psychiatric illness mortality (6%)**



Anorexia

- **Differential diagnosis**
 - **Consider other weight loss illnesses: Crohn's disease**
 - **Mental disorder: depression**
 - **Patients with mental disorder do not exhibit preoccupation with food**

Anorexia

- **Treatment**
 - **Nutritional rehabilitation**
 - **Weight restoration**
 - **Cognitive-behavioral therapy, family therapy**



Bulimia

- **Diagnosed in 1980s**
- **Characterized by binge-eating episodes, then inappropriate weight control**
- **Types of inappropriate weight control methods**
 - **Fasting, Enemas**
 - **Laxatives, Diuretics**
 - **Compulsive exercising**

Bulimia

- **Binge**
 - **Episode in which person eats larger amount of food than normal**
 - **Not a response to hunger**
 - **Usually response to depression, stress, self-esteem issue**

Bulimia

- **Binge Episode**
 - **Loss of control**
 - **Then short-lived calmness**
 - **Possible self-loathing**
 - **Cycle is obsessive, repeated**
 - **Consumption of comfort foods $\geq 2/\text{day}$**



Bulimia

- **Profile**
 - **Affects 1-3% young women**
 - **More common in women than men**
 - **Present in industrialized countries**
 - **High achievers**



Bulimia

- **Profile**
 - **Presentation**
 - **Anglos**
 - **Normal weight range**
 - **Increased frequency of depressive symptoms, mood and anxiety disorders**
 - **Prevalence of substance abuse, dependence (alcohol/stimulants) 30%**



Bulimia

- **Lab Studies: Electrolytes, metabolism show abnormalities from purging, various degrees of starvation**
- **Diagnosis**
 - **Rule out other medical and mental disorders**
 - **Check participation in inappropriate compensatory behavior, over-concern with body shape/weight**

Bulimia

- **Subtypes**
 - **Purging Type**
 - **Non-purging type**

Bulimia

- **Treatment**
 - **Medication**
 - **Antidepressants: SSRIs, generics Imipramine, Despiramine, Trazadone, and MAOIs**



Bulimia

- **Treatment**
 - **Clinical intervention**
 - **Psychiatric evaluation for comorbid conditions**
 - **May be on outpatient basis**
 - **Individual cognitive-behavioral group and family therapy**
 - **Possible hospitalization**



Obesity

Leading causes of death in the U.S. in 1990 & 2000:

- 1. Tobacco**
- 2. ??**
- 3. Alcohol consumption**
- 4. Microbial agents**
- 5. Toxic agents**
- 6. Motor vehicles**
- 7. Firearms**
- 8. Sexual behavior**
- 9. Illicit drug use**



Obesity

- **# 2 cause of death is poor diet and physical inactivity (16.6%)**
- **1998 NIH report: >50% U.S. adults overweight/obese**



Obesity

- **Standards**
 - **BMI: measure of body fat based on height/weight**
 - **Disadvantages of BMI as standard**
 - **May overestimate body fat in athletes/those with muscular build**
 - **May underestimate body fat in older person/those with depleted muscle mass**

Obesity

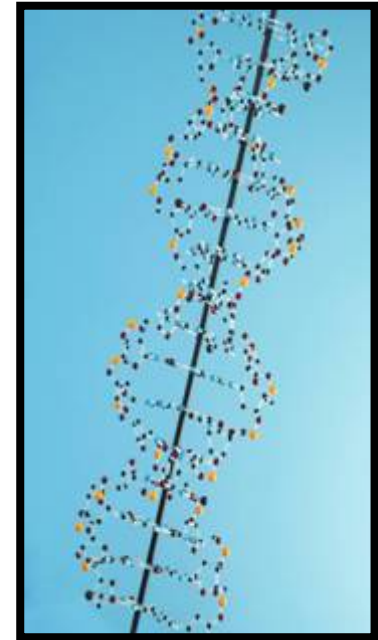
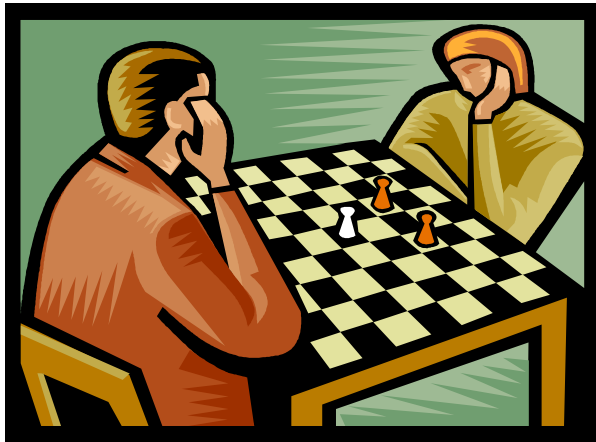
- **BMI Categories**
 - **Underweight = <18.5**
 - **Normal weight = 18.5-24.9**
 - **Overweight = 25-29.9**
 - **Obesity = BMI of 30 or greater**

Obesity

- **Standards**
 - **Weight tables**
 - **Women-5 feet = 100 lbs; add 5 lbs for each additional inch, +/-5%-10%**
 - **Men-5 feet = 106 lbs; add 5 lbs for each additional inch, +/-5%-10%**

Obesity

- **Weight factors: genetics, environment, behavioral, psychological**
- **Definition of weight gain: Intake of calories exceeds calories expended**



Obesity

- **60% U.S. meals consumed outside home. These meals significantly higher in fat, calories, are served in larger portions, lower in fruits, vegetables, grains**



Obesity

- **Risks to children**
 - **School lunch nutritional standards do not apply to vending machines**
 - **80% U.S. children consume 3 sodas/day**
 - **Decline in physical activity**
 - **Time watching TV: 3 hr/day**
- **Need early intervention**



Obesity

- **Risks to adults**
 - **Inactivity due to sedentary entertainment, job, time at computer, lack of exercise**



Obesity




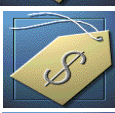
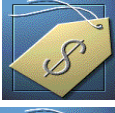



- **Costs**
 - **\$75 billion in 2003**
 - **Half costs paid by Medicare/Medicaid**



Obesity-Related Health Problems

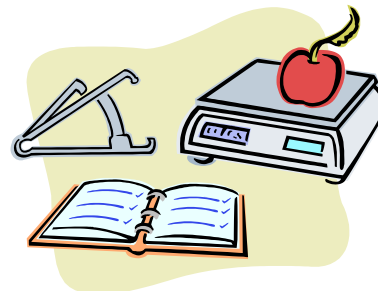
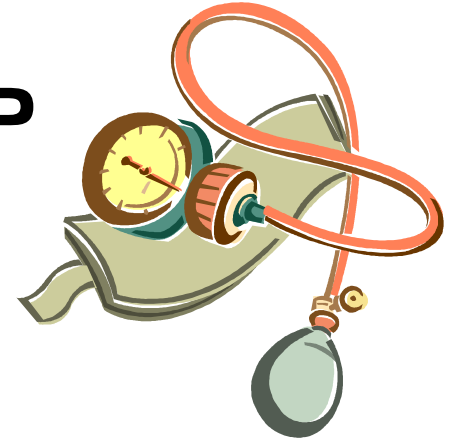
-  **Diabetes**
-  **Heart disease**
-  **Sleep apnea**
-  **Hypertension**
-  **Osteoarthritis**
-  **Cancer**
-  **DVT**
-  **ESRD**

Obesity-Other Related Health Problems

-  Impaired respiratory function
-  Wound infection following surgery
-  Infertility
-  Liver disease
-  Low back pain, Birth defects
-  Chronic venous insufficiency
-  Daytime sleepiness
-  Gall bladder disease, gout, stroke

Obesity

- **Recommendations for the HCP**
 - **Counsel patients**
 - **Be informed**
 - **Utilize personal exercise program, watch calories, be a role model**
 - **Screen patients using BMI/weight tables**
 - **Provide resources**



Obesity

- **Lab Studies**
 - **Check cardiovascular disorders, hypertension, hypercholesterolemia, diabetes, osteoarthritis, others**
 - **Check for depression/anxiety**

Treatment Options

- **Diets**
- **Exercise**
- **Behavioral counseling**
- **Pharmacotherapy**
- **Bariatric surgery**

Treatment Options

- **Diets:**
restrictive/variety/support groups
- **Exercise**
- **Behavioral counseling**

Treatment Options

- **Pharmacotherapy**
 - **Modestly effective**
 - **Amphetamines increase norepinephrine**
 - **Some drugs prevent macronutrient absorption**
 - **Xenical® inhibits fat absorption**
 - **Prescription meds are controlled substances except Orlistat [generic]**
 - **Use caution**

Treatment Options

- **Bariatric surgery: Gastric bypass, stomach transection/stapling**
 - **Determine degree of obesity**
 - **Comorbidities**
 - **Goal to allow patient to make healthy lifestyle changes**

Treatment Options (cont')

- **Follow-on considerations**
- **Patient determination, education**

Obesity

- **Issues**
 - **Health maintenance**

Summary

- **Definitions of anorexia, bulimia, and obesity**
- **Characteristics, patient profile, subtypes, signs and symptoms, lab findings, course and treatment of anorexia and bulimia**

Summary

- **Patient profile and health problems caused by obesity**
- **Diagnostic procedures, lab findings, treatment options, and issues related to obesity**